

## **REMARKS**

Applicants appreciate the Examiner's thorough consideration provided in the present application. Claims 1-8, 12-16 and 19-23 are currently pending in the instant application. Claims 5 and 7 have been amended. Claims 1, 5, 7, 12, 19 and 22 are independent. Reconsideration of the present application is earnestly solicited.

### **Allowable Subject Matter**

Applicants appreciate the Examiner's indication of allowable subject matter. Specifically, claims 12-15 and 19-23 have been allowed by the Examiner. In addition, claims 7, 8 and 16 have only been rejected due to the presence of potential informalities with the claims. In light of the foregoing amendment to claim 7, Applicants submit that claims 7, 8 and 16 should also be allowed. As described in greater detail hereinafter, Applicants submit that the remaining claims should also be allowed and the present application should be passed to Issue.

### **Oath/Declaration**

Applicants appreciate the Examiner's indication of a defective declaration. Applicants submit that it appears the Examiner may be referring

to the changes to the address under inventor Jason A. Kay on page 3 of the Declaration. Accordingly, Applicants will prepare and submit a substitute declaration in accordance with 37 CFR 1.67 resubmitting the proper mailing address and signature for this inventor. If additional or alternative changes are required by the Examiner, Applicants respectfully request that the Examiner contact the undersigned via telephone in the Washington, DC area.

**Claim Rejections Under 35 U.S.C. § 112**

The Examiner has identified potential informalities with the claims. Specifically, claims 7, 8 and 16 have been rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

In light of the foregoing amendments to the claims, Applicants submit that this rejection has been obviated and/or rendered moot. Without conceding the propriety of the Examiner's rejection, but merely to expedite advance the prosecution of the present application, Applicants have amended the claims to remove the presence of the alleged informalities. Accordingly, this rejection should be withdrawn.

The Examiner has indicated the use of the phrase "operable" and "collapsible between" lacks support. Applicants submit that the Examiner's interpretation is unreasonable and is respectfully traversed. In order to clarify

the claimed invention for the benefit of the Examiner, Applicants have amended this limitation in the foregoing amendment.

However, the Examiner is invited to review pages 7-8 of the specification. Clearly, the mold is operable between the two positions since the mold may be inserted with the prongs in either closed (collapsed) or open (extended) positions, and the prongs may then be expanded to an open position while within the tube. Therefore, in order to move the prongs from a closed to an open position, the prongs must inherently pass through a variety of intermediate positions such as closed, one-quarter-closed, half-open (or closed), and fully open (extended). Therefore, the mold is clearly "operable" between these positions since the prongs must move between these positions during operation. If the Examiner would prefer an alternative expression for this term, e.g., "moveable," the Examiner is reminded that he may contact the undersigned via telephone to address this issue and suggest any alternatives.

### **Drawings**

Applicants appreciate the Examiner's clarification of the objection to the drawings. FIGs. 1 and 4-8 have been resubmitted as formal drawings (since these contain no cited informalities). FIGs. 2 and 3 have been resubmitted

with marked-up changes in a Drawing Change Approval Request concurrently herewith.

As discussed in the responses filed on February 4, and March 3, 2003, the Examiner should be well aware that Applicants have not attempted to introduce any drawings, arguments or description that alleges the pivoted prongs are not pivotable. Accordingly, this objection is improper.

One of ordinary skill in the art would readily appreciate that the portion of the prongs (elements 24a, 24b) immediately surrounding the pivots (element 25a, 25b) would obviously require some clearance to permit the prongs to move relative to the support device (element 27). However, in order to clarify the subject matter of FIGs. 2 and 3 for the benefit of the Examiner, Applicants have submitted a concurrently filed Drawing Change Approval Request. Accordingly, this objection has been rendered moot.

### **Claim Rejections Under 35 U.S.C. § 102**

Claim 5 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Doty (U.S. Patent No. 3,293,018). These rejections are respectfully traversed.

In light of the foregoing amendments to the claims, Applicants submit that these rejections have been obviated and/or rendered moot. Specifically,

the prior art of record fails to teach or suggest each and every limitation of the unique combination of elements of the claimed invention.

With respect to claim 5, Applicants submit that the prior art of record fails to teach or suggest the unique combination of elements of the claimed invention, including the limitation(s) of “an internal mold having an exterior surface for supporting and shaping the inner surface of the selected end region of the tube when the tube is rendered malleable; an insertion device for inserting said internal mold within said selected end region of the tube, prior to the application of heat to the tube, *wherein said insertion device includes a sleeve or a handle; and a multi-part, exterior mold having a first exterior mold piece and a second exterior mold piece* for compressing the exterior surface of the selected end region of the tube and for shaping the exterior surface of the selected end region of the tube when rendered malleable, and for, concurrently causing the shape of the inner surface of the selected end region of the tube to conform to the exterior surface of the internal mold.” (emphasis added) Accordingly, this rejection should be withdrawn.

Applicants submit that the Examiner is apparently rejecting claim 5 based on claim language that does not appear in this claim. For example, the Examiner has referred to the phrases “wherein said insertion device includes at least one of a sleeve and a handle” and/or “this ‘means’ can be a paddle.” (see

page 4 and 5 of the Office Action. In order to clarify the claimed invention for the benefit of the Examiner, claim 5 has been amended to clearly claim a multi-part exterior mold having a first exterior mold piece and a second exterior mold piece. The Examiner is invited to review FIGs. 5(a)-7 (particularly elements 22a and 22b) for support for an exterior mold. Applicants submit that one of ordinary skill in the art would clearly not interpret the “paddle” of Doty to read on this claimed limitation. Accordingly, this rejection should be withdrawn.

As to the dependent claims, Applicants respectfully submit that these claims are allowable due to their dependence upon an allowable independent claim, as well as for additional limitations provided by these claims.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1-4 and 6 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zauner (U.S. Patent No. 4,444,908) in view of Novini (U.S. Patent No. 4,095,204). This rejection is respectfully traversed.

In light of the foregoing amendments to the claims, Applicants submit that this rejection has been obviated and/or rendered moot. Applicants respectfully submit that Zauner and/or Novini fail to teach or suggest the unique combination of elements of the claimed invention. Therefore, this rejection should be withdrawn.

For example, the Examiner has acknowledged that Zauner fails to teach or suggest “an apparatus for shaping a selected end region of a hollow cylindrical glass tube used in the manufacture of optic fibers comprising. . .*an optical sensing device for sensing a physical condition of the tube.*” In order to overcome this shortcoming, the Examiner has relied upon the alleged teachings of Novini. However, the Examiner has merely shown that optical sensing systems exist in the background art and has not provided any reason as to why one of ordinary skill in the art would include this feature within the same device that is used for shaping a selected end region of a hollow cylindrical glass tube used in the manufacture of optic fibers.

In order to form a proper rejection under 35 U.S.C. § 103(a), the Examiner is required to point to actual teachings as to why one of ordinary skill in the art would add or modify the base reference to include the missing features. However, the optical sensing system(s) identified by the Examiner are separate systems, even if found in a typical glassware manufacturing plant. In the claimed invention, an optical sensing device is provided within the same equipment used to shape and form the glass tube. In the prior art identified by the Examiner, the Examiner has merely shown that the concept of examining glassware for defects is already well known in the prior art. However, this issue is not been disputed. Instead, Applicants respectfully submit that the

claimed invention offers a unique combination of elements that includes dual capability of glassware manufacture and visual inspection in the same device. This unique combination of features has not been shown anywhere in the prior art of record. Further, Novini does not suggest that this feature should or even could be added to the device of Zauner. Accordingly, Applicants respectfully submit that this rejection appears improper and should be withdrawn.

In accordance with the above discussion of the patents relied upon by the Examiner, Applicants respectfully submit that these documents, either in combination together or standing alone, fail to teach or suggest the invention as is set forth by the claims of the instant application.

Accordingly, reconsideration and withdrawal of the claim rejection are respectfully requested. Moreover, the Applicants respectfully submit that the instant application is in a condition for allowance.

### **CONCLUSION**

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state-of-the-art, no further comments are necessary with respect thereto.



It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

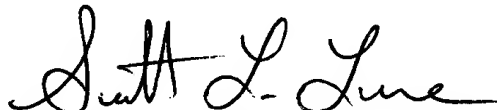
In the event there are any matters remaining in this application, the Examiner is invited to contact Matthew T. Shanley, Registration No. 47,074 at (703) 205-8000 in the Washington, D.C. area.

Applicants respectfully petition under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of **\$110.00** is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-1602 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

**MARKED-UP VERSION OF AMENDMENTS**

**IN THE CLAIMS:**

**The claims have been amended as follows:**

5. (Thrice Amended) An apparatus for shaping a selected end region of a hollow cylindrical glass tube used in the manufacture of optic fibers comprising:

a support device for holding the tube at a second region other than the selected end region and for rotating the tube in a controlled manner;

a heat source adapted to supply sufficient heat to the selected end region of the tube to render said tube malleable;

an internal mold having an exterior surface for supporting and shaping the inner surface of the selected end region of the tube when the tube is rendered malleable;

an insertion device for inserting said internal mold within said selected end region of the tube, prior to the application of heat to the tube, wherein said insertion device includes a sleeve or a handle; and

[an] a multi-part, exterior mold having a first exterior mold piece and a second exterior mold piece for compressing the exterior surface of the selected end region of the tube and for shaping the exterior surface of the selected end region of the tube when rendered malleable, and for, concurrently causing the

shape of the inner surface of the selected end region of the tube to conform to the exterior surface of the internal mold.

7. (Thrice Amended) An apparatus for shaping a selected end region of a hollow cylindrical glass tube used in the manufacture of optic fibers comprising:

a support device for holding the tube at a second region other than the selected end region and for rotating the tube in a controlled manner, wherein said support device is a lathe;

an internal mold for shaping an inner surface of the selected end region of the tube, said internal mold being selectively moveable [operable and collapsible] between an open and extended configuration and a closed and collapsed configuration;

an insertion device for inserting said internal mold within said selected end region of the tube and for setting the internal mold in its extended configuration;

a heat source supplying heat to the selected end region of the tube to render the tube malleable;

a member for compressing the exterior surface of the selected end region of the tube when rendered malleable, and for concurrently causing the shape of

an inner surface of the tube to conform to the exterior surface of the internal mold, wherein said member is an external mold or a paddle; and

an optical sensing device for sensing a physical condition of the tube.